

Alan Dion

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Education

- Ph.D. in Experimental Nuclear Physics, May 2007
Stony Brook University, Stony Brook, NY
Thesis Title: *Energy Loss and Flow of Heavy Quarks in Au+Au Collisions at $\sqrt{s_{NN}} = 200$ GeV*
Thesis Advisor: Professor Axel Drees
- B.S. in Physics and Mathematics, May 2002
University of Georgia, Athens, GA

Awards

- L. L. Hendren Memorial Scholarship in Physics
University of Georgia, 2000
- Ted L. Simons Memorial Award in Physics
University of Georgia, 2001
- Kossak Calculus Prize
University of Georgia, 2000

Research Experience

- PHENIX Experiment, June 2003-present
During the summer of 2003, I worked on testing and developing a Front-end module prototype for the Silicon Vertex Tracker Upgrade to the PHENIX experiment. In the following year, I developed a trigger algorithm for p+p collisions, and wrote stand-alone tracking software, for the future silicon upgrade. In Spring 2005, I began analyzing single electrons from heavy flavor decays. The results of this analysis have been presented at numerous conferences and have been published.
- Research Experience for Undergraduates, University of Georgia, Summer 2001
During my REU at the University of Georgia, I worked on basic theoretical and computational methods for effective QCD field theories.

Teaching Experience

- Teaching Assistant, Department of Physics and Astronomy, Stony Brook University, Fall 2002/Spring 2003 - I taught two semesters of introductory physics laboratory.
- Undergraduate Teaching Assistant, Department of Mathematics, University of Georgia, Fall 2000 - I graded homework for a class on calculus, linear algebra, and differential forms

Publications in Refereed Journals

- A. Adare et al. (PHENIX Collaboration): Transverse momentum and centrality dependence of dihadron correlations in Au+Au collisions at $\sqrt{s_{NN}} = 200$ GeV: Jet-quenching and the response of partonic matter. Physical Review C 77, 011901
- S. Afanasiev et al. (PHENIX Collaboration): Elliptic flow for phi mesons and (anti)deuterons in Au+Au collisions at $\sqrt{s_{NN}} = 200$ GeV. Physical Review Letters 99 (2007) 052301
- A. Adare et al. (PHENIX Collaboration): Correlated Production of p and \bar{p} in Au+Au Collisions at $\sqrt{s_{NN}} = 200$ GeV. Physics Letters B 649 (2007) 359-369
- A. Adare et al. (PHENIX Collaboration): System Size and Energy Dependence of Jet-Induced Hadron Pair Correlation Shapes in Cu+Cu and Au+Au Collisions at $\sqrt{s_{NN}} = 200$ and 62.4-GeV. Physical Review Letters 98 (2007) 232302
- A. Adare et al. (PHENIX Collaboration): Energy Loss and Flow of Heavy Quarks in Au+Au Collisions at $\sqrt{s_{NN}} = 200$ GeV. Physical Review Letters 98 (2007) 172301
- A. Adare et al. (PHENIX Collaboration): J/ψ production versus transverse momentum and rapidity in p+p collisions at $\sqrt{s} = 200$ GeV. Physical Review Letters 98 (2007) 232002
- A. Adare et al. (PHENIX Collaboration): Measurement of high- p_T single electrons from heavy-flavor decays in p+p collisions at $\sqrt{s} = 200$ GeV. Physical Review Letters 97 (2006) 252002
- A. Adare et al. (PHENIX Collaboration): Scaling properties of azimuthal anisotropy in Au+Au and Cu+Cu collisions at $\sqrt{s} = 200$ GeV. Phys. Rev. Lett. 98 (2007) 162301

- S. S. Adler et al. (PHENIX Collaboration): Improved measurement of double helicity asymmetry in inclusive midrapidity π^0 production for polarized p+p collisions at $\sqrt{s} = 200$ -GeV. Physical Review D 73 (2006) 091102
- S. S. Adler et al. (PHENIX Collaboration): Saturation of azimuthal anisotropy in Au + Au collisions at $\sqrt{s_{NN}}$ 62 GeV to 200 GeV. Physical Review Letters 94 (2005) 232302

Published Conference Proceedings

- A. Dion for the PHENIX Collaboration. Open Heavy Flavor Production in PHENIX. Nucl. Phys. A783 (2006) 219.
- A. Dion for the PHENIX Collaboration. Medium modification of heavy flavour production measured by PHENIX in Au + Au collisions at $\sqrt{s_{NN}} = 200$ GeV. Journal of Physics G, Volume 32, Number 12, S505.